09/719,757

COFC

Patent No. 6,920,368

Request for Cert. of Correction dated November 30, 2005

Attorney Docket No. 0702-002116

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

e≨tent No.

6,920,368 B Confirmation No. 4058

Inventor

Van Dyck et al.

Issued

July 19, 2005

Title

Method and Device for

**Correcting Proximity Effects** 

Examiner

**Douglas Shute** 

Customer No.

28289

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT FOR PTO MISTAKE (37 C.F.R. 1.322(a))

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

ATTENTION:

**Decision and Certificate of Correction Branch** 

Patent Issue Division

Sir:

In accordance with 35 U.S.C. §254, we attach hereto Form PTO/SB/44 and a copy of proof of PTO errors and request that a Certificate of Correction be issued in the above-identified patent. The following errors appear in the patent as printed:

<u>Column 2</u>, Line 15, " $K^{\forall}$  is the Hermitian" should read --  $K^{\vee}$  is the Hermitian -- See Preliminary Amendment dated 12/15/2000, page 2, Line 6.

<u>Column 5</u>, Line 10, "K<sup>∀</sup> is the Hermitian" should read -- K<sup>∨</sup> is the Hermitian -- See Preliminary Amendment dated 12/15/2000, page 2, Line 15.

Column 8, Line 11, Claim 2, "is the Hennitian conjugate" should read -- is the Hermitian conjugate -- (See the Examiner's Amendment accompanying the Notice of Allowability dated March 4, 2005, page 2, Claim 20, Line 7. Claim 20 issued as Claim 2.)

Respectfully submitted,

THE WEBB LAW FIRM

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whard ho him

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Page 1 of 1

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(Also Form PTO-1050)

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.

6,920,368 Bi

APPLICATION NO.

09/719,757

ISSUE DATE

July 19, 2005

**INVENTORS** 

Van Dyck et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 2, Line 15, "K" is the Hermitian" should read -- K' is the Hermitian --

Column 5, Line 10, "K" is the Hermitian" should read -- K' is the Hermitian --

Column 8, Line 11, Claim 2, "is the Hennitian conjugate" should read -- is the Hermitian conjugate --

MAILING ADDRESS OF SENDER: The Webb Law Firm

The Webb Law Firm 700 Koppers Building 436 Seventh Avenue Pittsburgh, PA 15219-1845

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-2450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select Option 2.



# PATENT APPLICATION/PCT Attorney Docket No. 702-002116

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Dirk E. M. VAN DYCK : METHOD AND DEVICE FOR

and Piotr Tomasz JEDRASIK : CORRECTING PROXIMITY EFFECTS

International Application :

No. PCT/BE99/00076

International Filing Date :

14 June 1999

Priority Dates Claimed :

16 June 1998

13 October 1998

Serial No. Not Yet Assigned :

Filed Concurrently Herewith :

Pittsburgh, Pennsylvania December 15, 2000

#### PRELIMINARY AMENDMENT

#### **BOX PCT**

Assistant Commissioner for Patents Washington, DC 20231

Sir:

Prior to initial examination, please amend the above-identified patent application

as follows:

#### **IN THE SPECIFICATION:**

Page 1, after the title, insert the following heading:

--BACKGROUND OF THE INVENTION--.

Page 1, after line 32, insert the following heading:

#### --SUMMARY OF THE INVENTION--.

Page 2, line 2, after "comprising" insert -- the steps--.

Page 2, after line 38, insert the following:

5 
$$-d^{(\ell)} = d^{(\ell-1)} + (K^{\nu}K + \lambda B(D))^{-1} K^{\nu} r^{(\ell-1)} \qquad r^{(\ell)} = a - K d^{(\ell)} - c$$

Page 3, line 6, delete "K\*" and substitute therefor --K'--.

Page 5, after line 27, insert the following heading:

#### --BRIEF DESCRIPTION OF THE DRAWINGS--.

Page 6, after line 12, insert the following heading:

-- DESCRIPTION OF THE PREFERRED EMBODIMENT---.

Page 8, after line 14, delete

"
$$d^{(\ell)} = d^{(\ell-1)} + (K*K + \lambda B(D))^{-1} K*r^{(\ell-1)}$$
  $r^{(\ell)} = a-Kd^{(\ell)}$ "

and substitute therefor

$$-d^{(\ell)} = d^{(\ell-1)} + (K'K + \lambda B(D))^{-1} K'r^{(\ell-1)} \qquad r^{(\ell)} = a - Kd^{(\ell)} - C$$

Page 8, line 19, delete "K\*" and substitute therefor --K'--.

Page 11, after line 18, insert the following heading:

--Table 1--.

Page 11, line 33, delete "en" and substitute therefor -- and --.

#### IN THE CLAIMS:

20

Original claims 1-20 were amended during Chapter II proceedings by substituting new claims 1-18 in a letter dated October 30, 2000. Please cancel original claims 1-20 and cancel amended claims 1-18 and rewrite them as new claims 21-37 as follows:

OIP, E AND		
DEC 0.5 2005 W	Application No.	Applicant(s)
	09/719,757	VAN DYCK ET AL.
Notice of Allowability	Examiner	Art Unit
HATTE	Douglas M. Shute	2121
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.313  1. This communication is responsive to amendment filed 12/2  2. The allowed claim(s) is/are 1-17 (old 19-35).  3. The drawings filed on 02 December 2004 are accepted by 4. Acknowledgment is made of a claim for foreign priority ure a) All b) Some* c) None of the:  1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have 3. Certified copies not received:  Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.  5. A SUBSTITUTE OATH OR DECLARATION must be subm	is (OR REMAINS) CLOSED in the communication of the appropriate communication is substantial of the Examiner.  Index 35 U.S.C. § 119(a)-(d) or (approximately of the examiner of this communication to file application.	the correspondence address is application. If not included cation will be mailed in due course. THIS ject to withdrawal from issue at the initiative  f).  No In this national stage application from the reply complying with the requirements
INFORMAL PATENT APPLICATION (PTO-152) which giv		
6. CORRECTED DRAWINGS ( as "replacement sheets") mu		
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached		
<ol> <li>1) ☐ hereto or 2) ☐ to Paper No./Mail Date</li> <li>(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of</li> </ol>		
(b) including changes required by the attached Examiner Paper No./Mail Date	's Amenament / Comment or in	the Office action of
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in the	I.84(c)) should be written on the o the header according to 37 CFR 1	drawings in the front (not the back) of I.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT	osit of BIOLOGICAL MATER FOR THE DEPOSIT OF BIOLO	IAL must be submitted. Note the DGICAL MATERIAL.
		•
Attachment(s)	E □ Nation of Inform	mal Batant Application (BTO 152)
<ol> <li>Notice of References Cited (PTO-892)</li> <li>Notice of Draftperson's Patent Drawing Review (PTO-948)</li> </ol>		mal Patent Application (PTO-152)
·	Paper No./Ma	ail Date
<ol> <li>Information Disclosure Statements (PTO-1449 or PTO/SB/ Paper No./Mail Date</li> </ol>	08), 7. 🛛 Examiner's An	nendment/Comment
4. Examiner's Comment Regarding Requirement for Deposit		atement of Reasons for Allowance
of Biological Material	9.  Other	•

Application/Control Number: 09/719,757

Art Unit: 2121

#### DETAILED ACTION

### Allowable Subject Matter ·

- 1. Claims 1-17 (old 19-35) are allowed.
- 2. Included herewith as an appendix is an Examiner's Amendment which modifies the amended claims as submitted on 12/2/04 to carry the renumbering of the claims per original Office Action into the bodies of the various dependent claims.

Application/Control Number: 09/719,757

Art Unit: 2121

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas M. Shute whose telephone number is (571) 272-3690. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 4, 2005

Anthony Knight
Supervisory Patent Examiner
Group 3600

Application 1/15 131

20. (Previously Presented) The method as claimed in claim 21, wherein step b) is determined utilizing the following iterative equation:

$$d^{(\ell)} = d^{(\ell-1)} + (K^{\nu}K + \lambda B(D))^{-1} K^{\nu} r^{-(\ell-1)}$$
with  $d^{(0)} = 0$  and  $r^{(0)} = a$ 

wherein a is a vector with the doses of the desired pattern as elements, d is a vector with the exposure doses of the precompensated pattern, K is the smearing function in matrix form,  $K^{v}$  is the Hermitian conjugate of the smearing function K, B is an operator and  $\lambda$  a regularization parameter.

3 21. (Previously Presented) The method as claimed in claim 22, wherein the operator B is defined as follows:

$$B(D) = \sum \left(\frac{d_i}{d_{tot}}\right) \ell n \left(\frac{d_i}{d_{tot}}\right)$$

in which the summation takes place over all pattern points,  $d_1$  is the  $i^{th}$  element of the vector d, and  $d_{tot}$  represents the summation over all elements of the vector d.

Wherein the final value of the regularization parameter in step e) is the regularization parameter

$$\frac{1}{N} \sum_{k=1}^{N} \left( a_k - \left[ K d_k (\lambda) \right]_k \right)^2$$

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